

SPIlnet: Science Professional & Integrated Learning Network

John Rice, Liz Johnson, June 2015

Background

The ACDS has received a grant of \$165,000 (inc \$15,000 GST) from the Office of the Chief Scientist (OCS) to promote sustainable long term work integrated learning (WIL) in science programs. This follows upon the ACER report *Work Integrated Learning in STEM in Australian Universities*, commissioned by the OCS, that shows education in the natural and physical sciences to have the least industry engagement among all STEM disciplines.

At the last AGM deans highlighted the importance of connecting a science education with employability. Since the great majority of science graduates will not be working in universities, more direct and systematic interactions between science courses and the world of work can only enhance the standing of science degrees. Such interactions also provide a platform for industry collaboration in research.

The Chief Scientist has regularly highlighted the limited industry/university interaction in Australia, contrasting the observation that 40% of companies engage with universities in the UK, compared with just 4% in Australia. There is growing awareness of the importance of building more productive relationships between university and industry, and the role to be played in this by work integrated learning. The recent National Work Integrated Learning Strategy released by Universities Australia and several peak industry bodies exemplifies this.

Concept and Terminology

There are many different notions of what WIL entails. Rather than stall activity around definitional debates, the ACDS will allow the project to elaborate the meaning of WIL in practice for science faculties, guided by an advisory group and a steering committee as described below. However, as a first step in guidance the ACDS proposes that the concept of WIL

- supports wide ranging external connection, rather than narrower 'industry' focus, by use of words like 'integrated' or 'co-operative' (such as in the ACEN).
- supports the role of graduates as beginning professionals and potential change agents rather than inductees into an existing work environment.
- Supports innovation in learning activities within universities that bring the workplace experience into the university.

SPIlnet is an initial suggestion towards a name that reflects these ideas.

The Approach

The grant has been provided to the ACDS specifically to establish a national network across science faculties and schools that promotes and supports WIL. The skeleton of this process consists of

- national forums at the end of 2015 and 2016,
- four regional workshops during 2016,
- a network website attached to the ACDS T&L site.

These elements are intended to establish, disseminate and multiply projects that

- Identify and build on current successful WIL programs,
- build a broad and collective science expertise in WIL nationally,
- exemplify achievable and sustainable forms of WIL.
- support the adoption of these forms through collaboration

The ACDS will draw upon

- its Teaching and Learning Network, via its Teaching and Learning Centre,
- its experience with the SaMnet professional learning project,
- direct input from its member Deans and their teams.

The T&L Centre provides an established network from which the new network can be built. Responsibility for WIL will be a teaching and learning leadership role, in all probability assumed by existing and emerging teaching and learning leaders and their contacts, possibly under the leadership by ADT&L's themselves in many instances. It makes good sense to generate the WIL network by expanding the T&L Centre's role.

SaMnet was a highly successful OLT funded project that developed leadership capability in teaching and learning by mentorship of team-based projects. Adopting the SaMnet model the project will fund a number of action learning projects. It will be governed by a Steering Group who will receive advice from an Advisory Panel of stakeholders. The role of the Steering Group and Advisory Panel is set out below, along with some indicative guidelines for action learning projects and a time-line for the project. These latter elements should serve as a starting point for discussion at the first Steering Group meeting.

Project Outcomes

The project will build a sustainable network inclusive of all ACDS members that raises the standing of WIL and builds capacity to include WIL in undergraduate and postgraduate science courses. Through the forums, workshops and website the network will

- identify and share experience of a spectrum of WIL activities, and an understanding of their key characteristics, requirements for success and outcomes,
- identify and share academic standards and course structures that make WIL successful and support judgments of quality,
- examine organizational structures needed to foster WIL, such as leadership, administrative support, central versus local aspects etc,
- provide advice and examples of effective relationship building at a variety of levels with industries and other organisations,
- provide a point of contact for the ACDS with peak organisational bodies.

Governance

Steering Group

The Steering Group will have an enhanced role including both project oversight and mentoring of participating action-learning projects as critical friends. This model was developed very successfully in the SaMnet leadership project. Experience and expertise from the Steering Group will reach into the central project delivery and also into each WIL project. The Steering Committee will:

- Provide strategic direction and review project activities
- Identify key measures of success for project over all, and project activities
- Oversee project governance
- Endorse criteria for action-learning projects

- Mentor action-learning project leaders and/or institutional WIL leaders

Suggested Composition

- Chair: Prof John Rice (ACDS)
- Director, ACDS T&L Centre, Liz Johnson
- Member of ACDS Exec
- A Deputy Vice Chancellor
- Academic WIL leader in STEM
- Two industry representatives

Reference Panel

Reference panel members will be selected for their specialist experience relevant to WIL in Science. They will be consulted individually on their area of expertise, and collectively to provide an independent view of the project. The Reference Panel will be assist with project evaluation.

Suggested Composition

- Chair: Dr Roslyn Prinsley (OCS)
- ACDS President or nominee
- ACDS Executive member
- Industry peak bodies
- Government and agencies involved in WIL

Action-Learning Projects

Leadership capacity for WIL in Science will be developed through credible Faculty initiatives (action-learning projects) that embed Work Integrated Learning into the formal or informal science curriculum. Projects must be actively endorsed by their host Faculty and supported with a commitment to co-funding alongside central project funding.

Expressions of interest for action-learning projects will be invited from member institutions of the ACDS. Selection criteria and requirements for project delivery will be finalized by the Steering Committee and may include requirements for co-design of WIL activities with industry.

Project timeline

